

Primary Porcine Corneal Epithelial Cells (CEC)

SKU: CDS12099 | Category: Primary Cells — Pig

Validation & Biomarker Data Guide · Lineage classification: Corneal (epithelial/stromal) cell

1. Product Overview

Primary Porcine Corneal Epithelial Cells (CEC) is a primary cell product from porcine Cornea for physiologically relevant in vitro studies. It can support research in cell physiology, signaling, metabolism, toxicology, drug response and cell-based assay development where a primary-cell model is preferred. Culture and passage conditions should follow the product-specific protocol. For research use only.

Primary tissue / source: Cornea | Growth type: Adherent Cells | Tumorigenic status: Normal Cells | Pack size: 1 x 0.5 million cells

2. Typical Applications

- Ocular cell series ; Epithelial cells ; Eye, ear, nose, throat and oral systems

3. Identity & Phenotypic Marker Panel

A representative identity panel for corneal (epithelial/stromal) cell products is shown below. Actual per-lot Certificates of Analysis should be consulted for verified identity data.

Marker	Expected Result	Range
Pan-cytokeratin (epithelial) / Keratocan (stromal)	Positive	60–92% positive
Vimentin (stromal subtype)	Positive	0–90% positive
CD31	Negative / low	≤4% (background)

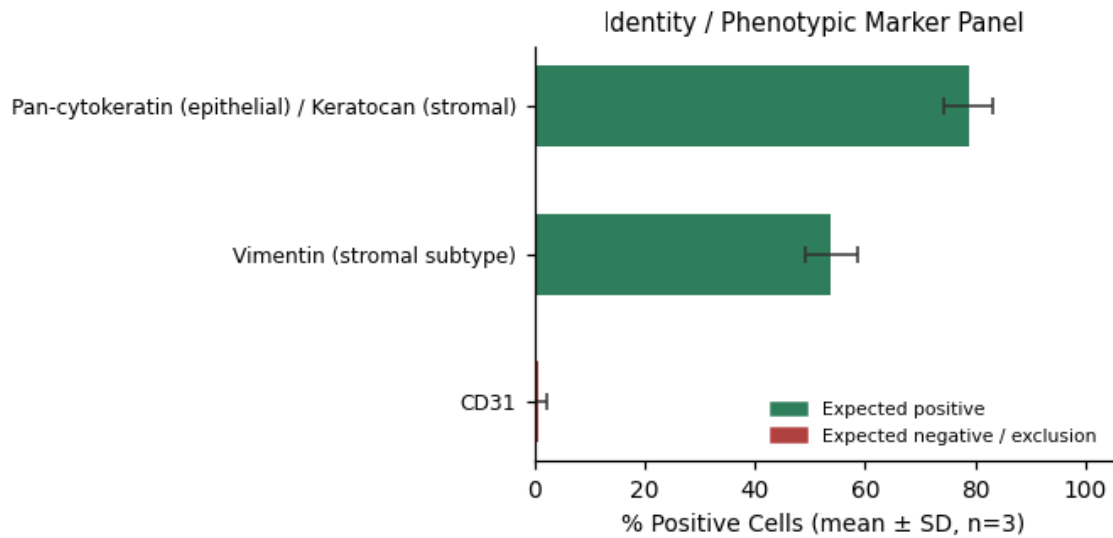


Figure 1. Marker expression profile (mean $\pm$ SD, n = 3 replicates).

4. Growth Kinetics & Viability

Growth and viability trends over 120 hours in standard culture conditions.

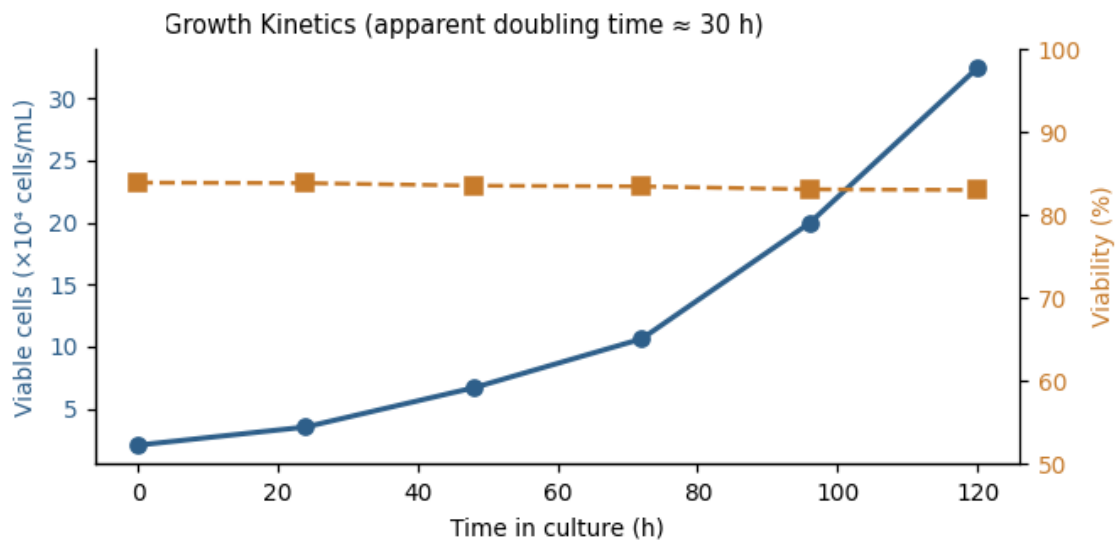


Figure 2. Growth curve (viable cell density, left axis) and viability trend (right axis).

5. Functional Validation Assay

Barrier / ECM synthesis assay: TEER measurement (epithelial subtype) or collagen/keratocan matrix synthesis assay (stromal subtype) to confirm corneal-lineage functional phenotype.

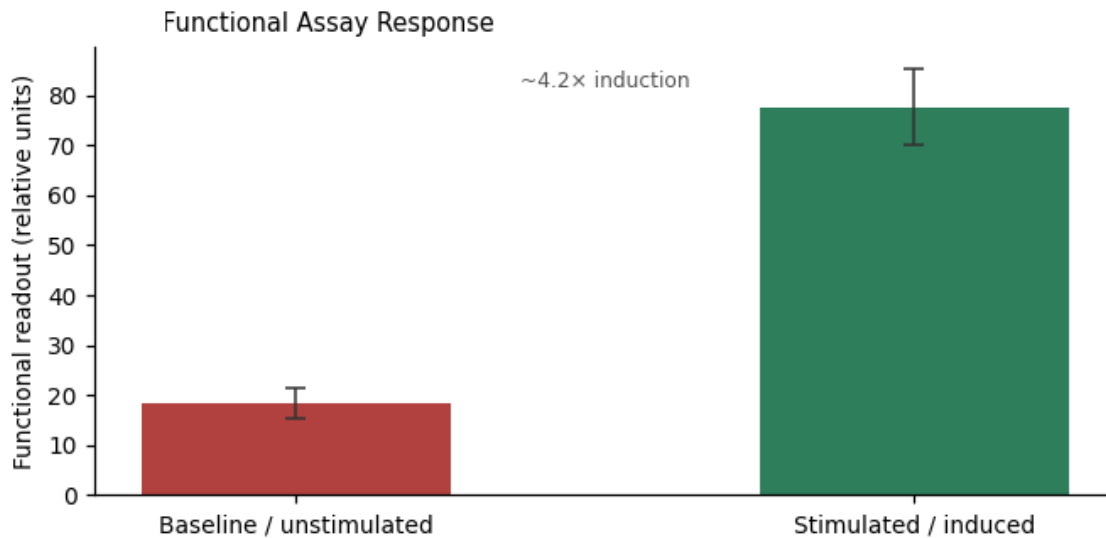


Figure 3. Functional assay readout — ~4.2× induction over baseline.

6. QC Acceptance Criteria

Acceptance Criterion	Result
Marker panel consistent with corneal epithelial or stromal identity by ICC	PASS
Morphology consistent with reference image	PASS
Apparent population doubling time	≈ 30 hours
Functional assay outcome	~4.2× induction over baseline

7. Handling & Culture Notes

- Refer to the product-specific Certificate of Analysis and datasheet for validated culture medium, seeding density, and passaging recommendations.
- As with any primary cell or cell line, confirm mycoplasma-negative status, expected morphology by phase-contrast microscopy, and viability by trypan blue or equivalent dye-exclusion assay at each passage before use in downstream assays.